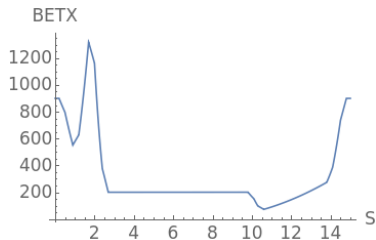


LhARA: Invivo Lattice in GPT

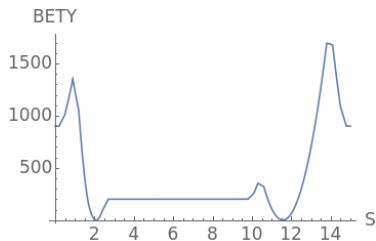
Hin Tung Lau

February 25, 2020

Beta Twiss Parameters



Minima: (10.6, 72.1307)

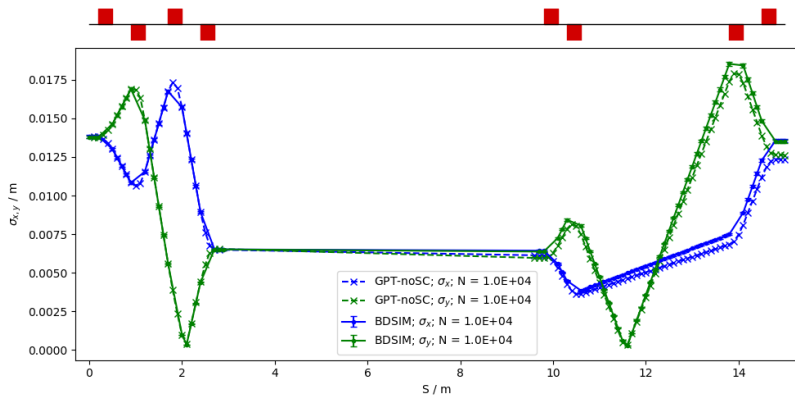


1st Minima: (2.075, 0.00137)

2nd Minima: (12, 0.00294)

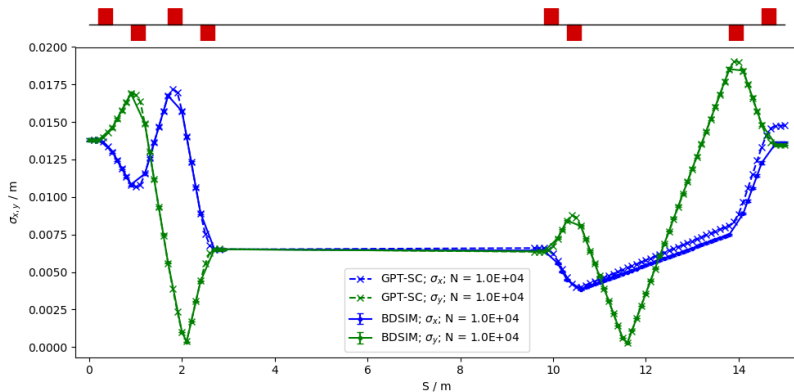
BDSIM Comparison – 127 MeV – No Space Charge

127 MeV beam, BDSIM and GPT comparison with no space charge:
(BETX = BETY = 900, emittance = 0.021×10^{-5})

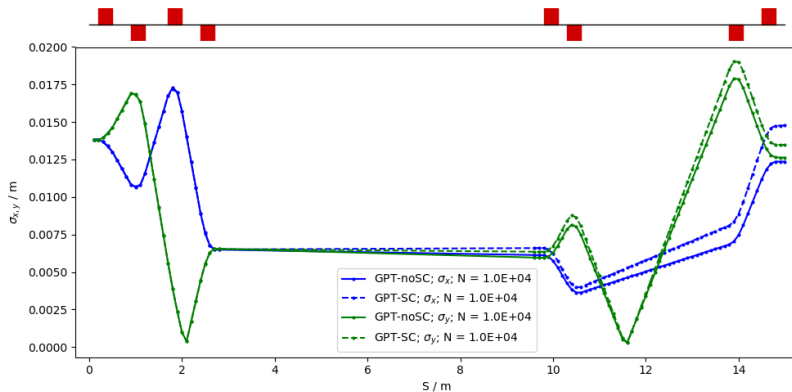


BDSIM Comparison – 127 MeV – Space Charge

127 MeV beam, BDSIM and GPT comparison with space charge:

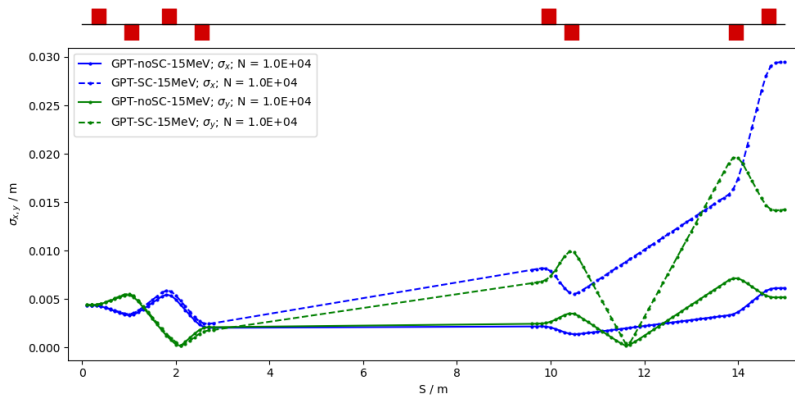


Comparison of no space charge and space charge from GPT for 127 MeV



GPT Comparison – 15 MeV

Comparison of no space charge and space charge from GPT for 15 MeV:
($BETX = BETY = 900$, emittance = 0.021×10^{-6})



GPT Comparison – 15 MeV

Comparison of no space charge and space charge from GPT for 15 MeV for second half of lattice:

(BETX = BETY = 200, emittance = 0.021×10^{-6})

